We Claim:

1. A cutting unit, comprising:

a pair of cylinders disposed opposite one another with a gap formed there-between for receiving a ribbon, said pair of cylinders including a first cutting cylinder having a periphery with a cutting knife disposed helically about said periphery and a second cylinder; and

a drive rotating said first cutting cylinder for cutting the ribbon such that a signature cut from the ribbon has a smooth, straight edge.

2. The cutting unit according to claim 1, wherein said drive is a first drive and including a second drive rotating and mounting said second cylinder, said first drive and said second drive rotating said cylinders such that a component of travel of a point of contact between said cylinders in a direction of travel of the ribbon matches a speed of the ribbon for cutting the ribbon in a straight line.

3. The cutting unit according to claim 1, including a control unit connected to and controlling said drive for controlling a rotational speed of said first cutting cylinder.

4. The cutting unit according to claim 2, including a control unit connected to and controlling said first drive and said second drive for controlling a rotational speed of said first cutting cylinder and said second cylinder.

5. The cutting unit according to claim 4, including:

a subframe having a pivot point about which said subframe is pivotable, said first drive, said second drive, and said cylinders are supported by said subframe; and

a further drive connected to said subframe for pivoting said subframe about said pivot point, a position of said subframe controlling a position of said cylinders in regard to the ribbon and therefore controlling a cutting length of the ribbon.

6. The cutting unit according to claim 5, including a sensor connected to said control unit, said sensor providing control signals to said control unit for controlling the operation of said cylinders.

7. The cutting unit according to claim 2, wherein said first drive and said second drive are motors.

8. The cutting unit according to claim 2, wherein said first drive and said second drive are gears to be driven by motors.

9. The cutting unit according to claim 6, wherein said sensor is selected from the group consisting of cameras, optical scanners, speed sensors, and position sensors, and said control unit is a microprocessor based control unit.

10. A folder, comprising:

a frame;

a subframe pivotally mounted in said frame about a pivot point;

a drive housed in said subframe; and

a pair of cylinders supported by said subframe and disposed opposite one another with a gap formed there-between for receiving a ribbon, said pair of cylinders including a first cutting cylinder having a periphery with a cutting knife disposed helically about said periphery and a second cylinder, said first cutting cylinder driven by said drive for cleanly cutting the ribbon such that a signature cut from the ribbon has a smooth, straight edge.

11. The folder according to claim 10, wherein said drive is a first drive and including a second drive rotating and mounting said second cylinder, said first drive and said second drive rotating said cylinders such that a component of travel of a point of contact between said cylinders in a direction of travel of the ribbon matches a speed of the ribbon for cutting the ribbon in a straight line.

12. The folder according to claim 10, including a control unit connected to and controlling said drive for controlling a rotational speed of said first cutting cylinder.

13. The folder according to claim 11, including a control unit connected to and controlling said first drive and said second drive for controlling a rotational speed of said first cutting cylinder and said second cylinder.

14. The folder according to claim 13, including a third drive connected to said subframe for pivoting said subframe about said pivot point, a position of said subframe controlling a position of said cylinders in regard to the ribbon and therefore controlling a cut-to-cut length of the signature cut from the ribbon.

15. The folder according to claim 13, including a sensor connected to said control unit, said sensor providing control

signals to said control unit for controlling the operation of said cylinders .

16. The folder according to claim 11, wherein said first drive and said second drive are motors.

17. The folder according to claim 11, wherein said first drive and said second drive are gears to be driven by motors.

18. The folder according to claim 15, wherein said sensor is selected from the group consisting of cameras, optical scanners, speed sensors, and position sensors, and said control unit is a microprocessor based control unit.

19. The folder according to claim 14, wherein:

if said cylinders are pivoted more parallel to the ribbon, the cut-to-cut length of the signature is increased; and

if said cylinders are pivoted less parallel to the ribbon, the cut-to-cut length of the signature is increased.

20. A method for cutting ribbons, which comprises the steps of:

transporting a ribbon between a pair of cylinders of a cutting unit disposed pivotally in a folder, the pair of cylinders including a first cutting cylinder having a periphery with a cutting knife disposed helically about the periphery and a second cylinder; and

rotating the cylinders such that a component of travel of a point of contact between the cylinders in a direction of travel of the ribbon matches a speed of the ribbon for cutting the ribbon such that a signature cut from the ribbon has a smooth, straight edge.

21. The method according to claim 20, which comprises:

increasing an angle between the cylinders and the ribbon for decreasing a cutting length of the signature, and adjusting a rotational speed of the cylinders for maintaining a straight cut of the signature; and

decreasing the angle between the cylinders and the ribbon for increasing the cutting length of the signature, and adjusting the rotational speed of the cylinders for maintaining the straight cut of the signature.